CTCGTGCCGAATTCGGCACGAGACCGCGTGTTCGCGCCTGGTAGAGATTTCTCGAAGACACCAGTGGGCCC GTGTGGAACCAAACCTGCGCGCGTGGCCGGGCCGTGGGACAACGAGGCCGCGGAGACGAAGGCGCAATGGC GAGGAAGTTATCTGTAATCTTGATCCTGACCTTTGCCCTCTCTGTCACAAATCCCCTTCATGAACTAAAAG CAGCTGCTTTCCCCCAGACCACTGAGAAAATTAGTCCGAATTGGGAATCTGGCATTAATGTTGACTTGGCA ATTTCCACACGGCAATATCATCTACAACAGCTTTTCTACCGCTATGGAGAAAATAATTCTTTGTCAGTTGA AGGGTTCAGAAAATTACTTCAAAATATAGGCATAGATAAGATTAAAAGAATCCATATACACCATGACCACG ACCATCACTCAGACCACGAGCATCACTCAGACCATGAGCGTCACTCAGACCATGAGCATCACTCAGACCAC GAGCATCACTCTGACCATGATCATCACCATAATCATGCTGCTTCTGGTAAAAATAAGCGAAAAGC TCTTTGCCC STACCATGACTCAGATAGTTCAGGTAAAGATCCTAGAAACAGCCAGGGGAAAGGAGCTCACC GACCAGAACATGCCAGTGGTAGAAGGAATGTCAAGGACAGTGTTAGTGCTAGTGAAGTGACCTCAACTGTG TACAACACTGTCTCTGAAGGAACTCACTTTCTAGAGACAATAGAGACTCCAAGACCTGGAAAACTCTTCCC AAACAAATGAATCTGTGAGTGAGCCCCGAAAAGGCTTTATGTATTCCAGAAACACAAATGAAAATCCTCAG GAGTGTTTCAATGCATCAAAGCTACTGACATCTCATGGCATGGGCATCCAGGTTCCGCTGAATGCAACAGA GTTCAACTATCTCTGTCCAGCCATCATCAACCAAATTGATGCTAGATCTTGTCTGATTCATACAAGTGAAA AGAAGGCTGAAATCCCTCCAAAGACCTATTCATTACAAATAGCCTGGGTTGGTGGTTTTATAGCCATTTCC ATCATCAGTTTCCTGTCTCTGCTGGGGGTTATCTTAGTGCCTCTCATGAATCGGGTGTTTTTCAAATTTCT CCTGAGTTTCCTTGTGGCACTGGCCGTTGGGACTTTGAGTGGTGATGCTTTTTTACACCTTCTTCCACATT CTCATGCAAGTCACCACCATAGTCATAGCCATGAAGAACCAGCAATGGAAATGAAAAGAGGACCACTTTTC AGTCATCTGTCTTCTCAAAACATAGAAGAAAGTGCCTATTTTGATTCCACGTGGAAGGGTCTAACAGCTCT AGGAGGCCTGTATTTCATGTTTCTTGTTGAACATGTCCTCACATTGATCAAACAATTTAAAGATAAGAAGA AAAAGAATCAGAAGAAACCTGAAAATGATGATGATGTGGAGATTAAGAAGCAGTTGTCCAAGTATGAATCT CAACTTTCAACAAATGAGGAGAAAGTAGATACAGATGATCGAACTGAAGGCTATTTACGAGCAGACTCACA AGAGCCCTCCCACTTTGATTCTCAGCAGCCTGCAGTCTTGGAAGAAGAAGAGGTCATGATAGCTCATGCTC ATCCACAGGAAGTCTACAATGAATATGTACCCAGAGGGTGCAAGAATAAATGCCATTCACATTTCCACGAT ACACTCGGCCAGTCAGACGATCTCATTCACCACCATCATGACTACCATCATATTCTCCATCATCACCACCA CCAAAACCACCATCCTCACAGTCACAGCCAGCGCTACTCTCGGGAGGAGCTGAAAGATGCCGGCGTCGCCA CTTTGGCCTGGATGGTGATAATGGGTGATGGCCTGCACAATTTCAGCGATGGCCTAGCAATTGGTGCTGCT TTTACTGAAGGCTTATCAAGTGGTTTAAGTACTTCTGTTGCTGTGTTCTGTCATGAGTTGCCTCATGAATT AGGTGACTTTGCTGTTCTACTAAAGGCTGGCATGACCGTTAAGCAGGCTGTCCTTTATAATGCATTGTCAG CCATGCTGGCGTATCTTGGAATGGCAACAGGAATTTTCATTGGTCATTATGCTGAAAATGTTTCTATGTGG ATATTTGCACTTACTGCTGGCTTATTCATGTATGTTGCTCTGGTTGATATGGTACCTGAAATGCTGCACAA TGATGCTAGTGACCATGG<u>ATGTAGCCGCTGGGGGTATTTCTTTT</u>ACAGAATGCTGGGATGCTTTTGGGTT TTGGAATTATGTTACTTATTTCCATATTTGAACATAAAATCGTGTTTCGTATAAATTTCTAGTTAAGGTTT AAATGCTAGAGTAGCTTAAAAAGTTGTCATAGTTTCAGTAGGTCATAGGGAGATGAGTTTGTATGCTGTAC AAAGGTACGTTTTAATATTTAAGTTATTCTATCTTGGAGATAAAATCTGTATGTGCAATTCACCGGTATTA CCAGTTTATTATGTAAACAAGAGATTTGGCATGACATGTTCTGTATGTTTCAGGGAAAAATGTCTTTAATG CTTTTTCAAGAACTAACACAGTTATTCCTATACTGGATTTTAGGTCTCTGAAGAACTGCTGGTGTTTAGGA ATAAGAATGTGCATGAAGCCTAAAATACCAAGAAAGCTTATACTGAATTTAAGCAAAGAAATAAAGGAGAA AAGAGAAGAATCTGAGAATTGGGGGAGGCATAGATTCTTATAAAAATCACAAAATTTGTTGTAAATTAGAGG ATTATTTCCCGTAAAAACGTAGTGAGCACTCTCATATACTAATTAGTGTACATTTAACTTTGTATAATACA GAAATCTAAATATATTTAATGAATTCAAGCAATATACACTTGACCAAGAAATTGGAATTTCAAAATGTTCG TGCGGGTTATATACCAGATGAGTACAGTGAGTAGTTTATGTATCACCAGACTGGGTTATTGCCAAGTTATA TATCACCAAAAGCTGTATGACTGGATGTTCTGGTTACCTGGTTTACAAAATTATCAGAGTAGTAAAACTTT GATATATATGAGGATATTAAAACTACACTAAGTATCATTTGATTCGATTCAGAAAGTACTTTGATATCTCT CAGTGCTTCAGTGCTATCATTGTGAGCAATTGTCTTTATATACGGTACTGTAGCCATACTAGGCCTGTCTG TGGCATTCTCTAGATGTTTCTTTTTTACACAATAAATTCCTTATATCAGCTTG

FIGURE 1

 $\underline{\mathtt{ATG}}\mathsf{GCGAGGAAGTTATCTGTAATCTTGATCCTGACCTTTGCCCTCTGTCACAAATCCCCTTCATGAACT$ AAAAGCAGCTGCTTTCCCCCAGACCACTGAGAAAATTAGTCCGAATTGGGAATCTGGCATTAATGTTGACT TGGCAATTTCCACACGGCAATATCATCTACAACAGCTTTTCTACCGCTATGGAGAAAATAATTCTTTGTCA GTTGAAGGGTTCAGAAAATTACTTCAAAATATAGGCATAGATAAGATTAAAAGAATCCATATACACCATGA ${\tt CCACGACCATCACTCAGACCACG}{\tt AGCATCACTCAGACCATGAGCGTCACTCAGACCATGAGCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGCATCACTCAGACCATGAGACCATGAGACCATGAGACCATGAGACCATGAGACCATGAGACCATGAGACCATGAGACACATGAGACACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGAGACATGAGACATGAGACATGAGACATGAGACATGAGAGACATGAGAGACATGAGAGACATGAGAGACATGAGACATGAGACATGAGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGAGACATGAACATGAGAGAACATGAGAGAACATGAGAGAACATGAGAGAACATGAGAACATGAGAGAACATGAACATGAGAACATGAGAACATGAGAGAACATGAGAACATGAGAACATGAGAACATGAGAACATGAACATGAGAACATGAGAACATGAGAACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGAGACATGA$ ACCACGAGCATCACTCTGACCATGATCATCACCATAATCATGCTGCTTCTGGTAAAAATAAGCGA AAAGCTCTTTGCCCAGACCATGACTCAGATAGTTCAGGTAAAGATCCTAGAAACAGCCAGGGGAAAGGAGC TCACCGACCAGAACATGCCAGTGGTAGAAGGAATGTCAAGGACAGTGTTAGTGCTAGTGAAGTGACCTCAA CTGTGTACAACACTGTCTCTGAAGGAACTCACTTTCTAGAGACAATAGAGACTCCAAGACCTGGAAAACTC TAGGAAAACAAATGAATCTGTGAGTGAGCCCCGAAAAGGCTTTATGTATTCCAGAAACACAAATGAAAATC CTCAGGAGTGTTTCAATGCATCAAAGCTACTGACATCTCATGGCATGGGCATCCAGGTTCCGCTGAATGCA ACAGAGTTCAACTATCTCTGTCCAGCCATCATCAACCAAATTGATGCTAGATCTTGTCTGATTCATACAAG TGAAAAGAAGGCTGAAATCCCTCCAAAGACCTATTCATTACAAATAGCCTGGGTTGGTGGTTTTATAGCCA $\tt TTTCCATCATCAGTTTCCTGTCTCTGGGGGGTTATCTTAGTGCCTCTCATGAATCGGGTGTTTTTCAAA$ TTTCTCCTGAGTTTCCTTGTGGCACTGGCCGTTGGGACTTTGAGTGGTGATGCTTTTTTACACCTTCTTCC ACATTCTCATGCAAGTCACCACCATAGTCATAGCCATGAAGAACCAGCAATGGAAATGAAAAGAGGACCAC TTTTCAGTCATCTGTCTTCTCAAAACATAGAAGAAGTGCCTATTTTGATTCCACGTGGAAGGGTCTAACA GCTCTAGGAGGCCTGTATTTCATGTTTCTTGTTGAACATGTCCTCACATTGATCAAACAATTTAAAGATAA GAAGAAAAAGAATCAGAAGAAACCTGAAAATGATGATGATGTGGAGATTAAGAAGCAGTTGTCCAAGTATG AATCTCAACTTTCAACAAATGAGGAGAAAGTAGATACAGATGATCGAACTGAAGGCTATTTACGAGCAGAC TCACAAGAGCCCTCCCACTTTGATTCTCAGCAGCCTGCAGTCTTGGAAGAAGAAGAGGTCATGATAGCTCA TGCTCATCCACAGGAAGTCTACAATGAATATGTACCCAGAGGGTGCAAGAATAAATGCCATTCACATTTCC ACGATACACTCGGCCAGTCAGACGATCTCATTCACCACCATCATGACTACCATCATATTCTCCATCATCAC CACCACCAAAACCACCATCCTCACAGTCACAGCCAGCGCTACTCTCGGGAGGAGCTGAAAGATGCCGGCGT CGCCACTTTGGCCTGGATGGTGATAATGGGTGATGGCCTGCACAATTTCAGCGATGGCCTAGCAATTGGTG $\tt CTGCTTTTACTGAAGGCTTATCAAGTGGTTTAAGTACTTCTGTTGTTGTTGTCATGAGTTGCCTCAT$ GAATTAGGTGACTTTGCTGTTCTACTAAAGGCTGGCATGACCGTTAAGCAGGCTGTCCTTTATAATGCATT GTCAGCCATGCTGGCGTATCTTGGAATGGCAACAGGAATTTTCATTGGTCATTATGCTGAAAATGTTTCTA ${\tt CACAATGATGCTAGTGACCATGGATGTAGCCGCTGGGGGTATTTCTTTTACAGAATGCTGGGATGCTTTT}$ GGGTTTTGGAATTATGTTACTTA<mark>TTTCCATATTTGAACATAAAATCGTGT</mark>TTCGTATAAATTTCTAG

FIGURE 2

MARKLSVILILTFALSVTNPLHELKAAAFPQTTEKISPNWESGINVDLAISTRQYHLQQLFYRYGENNSLS
VEGFRKLLQNIGIDKIKRIHIHHDHDHHSDHEHIETIETPRPGKL
FPKDVSSSTPPSVTSKSRVSRLAGRKTNESVSEPRKGFMYSRNTNENPQECFNASKLLTSHGMGIQVPLNA
TEFNYLCPAIINQIDARSCLIHTSEKKAEIPPKTYSLQIAWVGGFTASSINSFISSINGVINVPLMNRAGK

LSGDAFLHLLPHSHASHHHSHSHEEPAMEMKRGPLFSHLSSQNIEESAYFDSTWKGLT
LSGDAFLHLLPHSHASHHHSHSHEEPAMEMKRGPLFSHLSSQNIEESAYFDSTWKGLT
SQEPSHFDSQQPAVLEEEEVMIAHAHPQEVYNEYVPRGCKNKCHSHFHDTLGQSDDLIHHHHDYHHILHHH
HHQNHHPHSHSQRYSREELKDAGVATLAWMVIMGDGLHNFSDGLAIGAAFTEGLSSGLSTSVAVFCHELPH
ELGDFAVLLKAGMTVKQAVLYNA

FIGURE 3

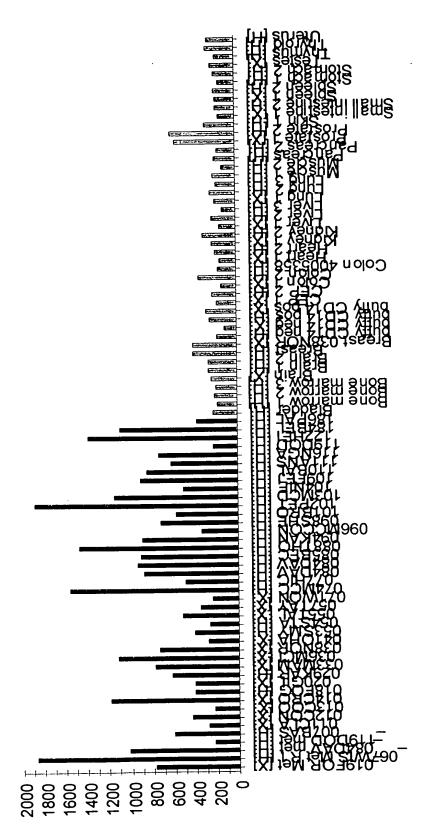


FIGURE 4